FINAL ANALYSIS AND FINDINGS REQUIRED BY HEALTH AND SAFETY CODE SECTION 25150.6
December 3, 2001
DTSC RULEMAKING R-00-09
SCHOOLS HAZARDOUS WASTE COLLECTION, CONSOLIDATION, AND ACCUMULATION FACILITY (SHWCCAF) PERMIT BY RULE (PBR) AUTHORIZATION

INTRODUCTION: Rulemaking R-00-09, referred to as the Schools Hazardous Waste Collection, Consolidation, and Accumulation Facility (SHWCCAF) Permit by Rule (PBR) authorization regulations, allows the following two activities that differ from existing statutory requirements for transportation and management of hazardous waste:

1) Transportation of eligible wastes from contributing K - 12 schools to the SHWCCAF without use of a hazardous waste manifest or registered transporter, only under specified conditions; and

2) Limitation of the scope of the Phase I environmental assessment requirement to only the operational area of the SHWCCAF.

This document sets forth the final analysis and findings required by Health and Safety Code section 25150.6 (Appendix) for regulations that vary from statutory requirements for hazardous wastes. The Department of Toxic Substances Control (DTSC) made the preliminary document available for review and comment during the 45-day public comment period for the draft regulations. Only one comment was received on the draft regulations during the 45-day public comment period. This comment fully supported the regulations and did not request changes to the regulations as proposed. Consequently, no changes were made to the final regulations and this document updates and finalizes the preliminary document without substantive changes to the analysis and findings.

A copy of this document will be available on DTSC's Internet site at http://www.ca.gov for 10 working days prior to formal adoption of the regulations and transmittal of the regulations to the Office of Administrative Law (OAL) for final review. A copy of the document may also be requested from Ms. Joan Ferber of DTSC's Environmental Analysis and Regulation Section at (916) 322-6409. If Ms. Ferber is unavailable, please call Ms. Cheryl Closson at (916) 322-6756, or Mr. James McRitchie at (916) 327-8642.

OVERVIEW OF THE PROPOSED REGULATIONS:

Individual schools throughout the state generate hazardous waste as a normal part of the operation and maintenance of each school. Prior to transport to a disposal facility, these wastes are usually stored on the school campus in close proximity to the

students. However, K - 12 schools are generally not equipped or designed to store the hazardous wastes they generate and storage space that may have been previously available at school sites is now often needed for teaching purposes. Some school districts would like to accumulate and temporarily store the hazardous wastes generated from several schools at a separate, non-schoolyard location, such as a corporation yard owned by the school district. Offsite collection, accumulation, and storage would allow school districts to reduce the volumes of hazardous wastes stored at individual schools, thereby reducing the risk of exposure to students from those hazardous wastes. Offsite accumulation and storage of hazardous wastes from multiple schoolsites would also allow for environmental and economic efficiencies by reducing the number and size of hazardous waste storage areas and by reducing the number of small shipments of hazardous waste to recycling or disposal facilities.

In California, offsite storage of hazardous waste is a regulated activity that requires authorization under the DTSC's five-tiered program for hazardous waste treatment or storage. The highest or most rigorous tier, known as the "Full Permit," addresses federal Resource Conservation and Recovery Act (RCRA) hazardous waste transfer, storage, or disposal facilities. The four lower permit tiers address wastes that are either non-RCRA, or not subject to the RCRA permitting requirements. The lower permit or authorization tiers include, in order of decreasing requirements, the "Standardized Permit," PBR, "Conditional Authorization" (CA), and "Conditionally Exempt" (CE). The Standardized Permit is similar to the Full Permit and addresses onsite or offsite treatment, storage, and disposal of non-RCRA wastes or wastes not subject to RCRA permitting requirements. PBR, CA, and CE generally address onsite treatment of hazardous waste, but PBR is also used to authorize offsite collection and storage facilities accepting household hazardous waste and federal Conditionally Exempt Small Quantity Generator (CESQG) hazardous waste.

Currently, the only tiered permitting authorization option available for offsite collection and storage of hazardous wastes by K - 12 school districts is the Standardized Permit. However, the waste management risks associated with K - 12 schools are more on par with household hazardous and CESQG wastes than the risks associated with the larger volumes of wastes and higher risk activities managed under Standardized Permit requirements. The final regulations will provide school districts with a PBR authorization alternative to Standardized Permit requirements for offsite collection, consolidation, and accumulation of hazardous wastes generated by the routine operation and maintenance of K - 12 schools.

The final PBR authorization regulations will require similar key waste management and facility operation protections as a Standardized permit, including facility inspections, secondary containment, and closure financial assurance. However, instead of requiring review and approval of facility plans prior to authorization (as with the Standardized

Permit), the facility owner or operator would submit a notification to the local CUPA. In addition to the facility requirements, the final regulations establish specific standards for transportation of eligible wastes to the SHWCCAF.

PROVISIONS THAT DEVIATE FROM EXISTING HAZARDOUS WASTE STANDARDS:

The final regulations establish the following specific standards that deviate from the hazardous waste statutory requirements:

Use of a manifest for transportation: Health and Safety Code section 25160. Health and Safety Code section 25160 requires the use of a Uniform Hazardous Waste Manifest for transporting hazardous wastes and establishes procedures for the use of the manifest. The final regulations provide an exemption from this requirement for hazardous wastes generated by K - 12 schools that are transported to the SHWCCAF, in volumes greater than 5 gallons or 50 pounds but no more than 135 gallons or 1,100 pounds. The final regulations instead require that the wastes be transported to the SHWCCAF using a shipping paper in accordance with the requirements established in the final regulations and in accordance with applicable requirements of the United States Department of Transportation (DOT) for shipments of hazardous materials and wastes.

Use of a registered hazardous waste transporter for transportation: Health and Safety Code section 25163. Health and Safety Code section 25163 requires that all hazardous waste be transported by a Registered Hazardous Waste Transporter and establishes requirements for registered transporters. The final regulations provide an exemption from this requirement for hazardous wastes generated by K - 12 schools that are transported to the SHWCCAF, in volumes greater than 5 gallons or 50 pounds but no more than 135 gallons or 1,100 pounds. The final regulations instead allow the wastes to be transported to the SHWCCAF by trained employees in vehicles owned or operated by the contributing school or the owner or operator of the SHWCCAF. In addition, the final regulations establish that liability for spills transported under this provision shall be assumed either by the contributing school, for wastes transported by the contributing school, or by the owner or operator of the SHWCCAF, for wastes they transport.

Phase I environmental assessment requirement: Health and Safety Code sections 25200.10 and 25200.14. Health and Safety Code sections 25200.10 and 25200.14 require that PBR facilities conduct a Phase I environmental assessment (Phase I) for the entire site under the control of the owner or operator seeking authorization. The final regulations instead limit the scope of the Phase I to the area defined by the operational boundary of the SHWCCAF.

DOCUMENT FORMAT: This document follows the organization of Health and Safety Code section 25150.6. To assist the reader's understanding of the analysis and findings, each subsection of section 25150.6 is set forth in italics prior to the DTSC Evaluation, which includes analysis, explanation, and/or other information. Every subsection of the statute is addressed and the DTSC Evaluation sections identify those subsections that are not applicable.

FORMAL SECTION 25150.6 ANALYSIS: As discussed above, DTSC is exempting transportation to and offsite collection of K-12 school hazardous wastes at a SHWCCAF from the statutory requirements found in Health and Safety Code sections 25160, 25163, 25200.10 and 25200.14. The required analysis follows:

Section 25150.6. (a) Except as provided in subdivision (e), DTSC, by regulation, may exempt a hazardous waste management activity from one or more of the requirements of this chapter, if DTSC does all of the following:

(1) Prepare an analysis of the hazardous waste management activity to which the exemption will apply pursuant to subdivision (b). DTSC shall first prepare the analysis as a preliminary analysis and make it available to the public at the same time that DTSC gives notice, pursuant to Section 11346.4 of the Government Code, that it proposes to adopt a regulation exempting the hazardous waste management activity from one or more of the requirements of this chapter. DTSC shall include, in the notice, a reference that DTSC has prepared a preliminary analysis and a statement concerning where a copy of the preliminary analysis can be obtained. The information in the preliminary analysis shall be updated and DTSC shall make the analysis available to the public as a final analysis not less than ten working days prior to the date that the regulation in adopted.

> **DTSC Evaluation:** This document provides the final analysis and findings required by Health and Safety Code section 25150.6. The preliminary analysis and findings document was referenced, as required, in both the 45-day public notice and the Initial Statement of Reasons for the regulations. Only one comment was received on the draft regulations during the 45-day public comment period. This comment fully supported the regulations and did not request changes to the regulations as proposed. Consequently, no changes were made to the final regulations and this document updates and finalizes the preliminary document without substantive changes to the analysis and findings.
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> A copy of this document will be available upon request and on DTSC's Internet site at http://www.ca.gov for 10 working days prior to formal adoption of the regulations and transmittal of the regulations to the Office of Administrative Law (OAL) for final review.

(2) Demonstrates that one of the conclusions required by subdivision (c) is valid.

DTSC Evaluation: This document demonstrates that the conclusions found in paragraphs (B)(3) and (4) of subdivision (c) are valid. See the discussion following the text of those paragraphs below for the formal analysis.

(3) Imposes, as may be necessary, conditions and limitations on the exemption that ensure that the exempted activity will not pose a significant potential hazard to human health or safety or to the environment.

DTSC Evaluation: Through general requirements and requirements specific to the exempted activities, the final regulations themselves incorporate the conditions necessary to protect human health, safety, and the environment.

First, the general requirements establish that the only wastes eligible for transport to and management at a SHWCCAF are hazardous wastes that are either non-RCRA, or are RCRA exempt, generated by the routine operation and maintenance of a K - 12 school. In addition, reactive hazardous wastes are prohibited and school science lab wastes must be lab packed prior to transport to the SHWCCAF. These eligible waste restrictions ensure that the wastes being transported and managed at the SHWCCAF are low volume, low-risk wastestreams. Facility conditions prohibiting treatment, uncontained storage, storage in waste piles and surface impoundments, or land disposal of hazardous wastes at the SHWCCAF further ensure that management of hazardous wastes at the SHWCCAF is low risk.

The specific conditions and limitations imposed on the exempted activities are discussed below.

Transportation

Equivalent human health, safety, and environmental protections for transport of hazardous wastes from contributing K - 12 schools to a SHWCCAF without a manifest or registered transporter are provided by the following conditions and limitations:

All hazardous waste must be packaged and labeled for transport according to existing hazardous waste generator requirements

Personnel transporting the waste must be trained in hazardous waste identification and management, as well as in emergency and non-

emergency spill response.

Vehicles used to transport the waste must be owned or operated by the contributing school or the owner or operator of the SHWCCAF.

Contributing schools and the owner or operator of the SHWCCAF must assume liability for any spills of hazardous waste they transport under this exemption.

The hazardous waste must not be held at any interim location for more than 8 hours while en route to the SHWCCAF.

Shipments of hazardous waste must be accompanied by a shipping paper detailing eleven waste transport information areas.

Shipments of hazardous waste must conform with all applicable DOT requirements for shipments of hazardous wastes and materials.

Records of waste shipments and shipping papers must be maintained at the SHWCCAF and made available for immediate inspection for a minimum for three years.

All hazardous wastes transported from the SHWCCAF to authorized treatment or disposal facilities must be transported according to existing hazardous waste manifest and registered transporter requirements.

The main purposes for the existing hazardous waste manifest and registered transporter requirements are to provide for “cradle to grave” tracking of hazardous waste and to ensure that liability provisions are in place for hazardous waste spills or releases during transportation. Human health, safety, and the environment are protected through the reinforcement of proper management and disposal of generated wastes provided by waste tracking and by providing mechanisms to assess liability and pay for cleanups associated with spills or releases. The above requirements for transportation from contributing schools to the SHWCCAF provide equivalent protections through the use of shipping papers, personnel training requirements, vehicle use restrictions, and assignments of liability associated with who transports the waste.

<u>Phase I</u>

As with the existing requirements for Permanent Household Hazardous Waste Collection Facilities (PHHWCFs) authorized under PBR, the proposed regulations provide for limitation of the scope of the Phase I environmental assessment to only the operational area of the SHWCCAF. Equivalent human health, safety, and environmental protections to the existing Phase I requirements are provided for by the following conditions and limitations:

Waste containers and tanks system must have secondary containment.

An engineering certification must be prepared attesting to the suitability of the secondary containment systems used.

The owner or operator of the SHWCCAF must comply with emergency and spill response, preparedness, and prevention requirements.

All hazardous waste and hazardous waste constituents accumulated and stored at the SHWCCAF must be removed upon closure of the facility.

The SHWCCAF must be closed in a manner that controls, minimizes, or eliminates, to the extent necessary to protect human health, safety, and the environment, potential or actual releases to soil, water, or air of hazardous waste, hazardous waste constituents, leachate, contaminated rainwater, or waste decomposition products from wastes managed at the SHWCCAF.

The owner or operator of the SHWCCAF must complete a Phase I environmental assessment of the area defined by the operation boundary of the SHWCCAF within one year of commencing operation.

The main purpose of the Phase I environmental assessment requirement is to ensure that facility owners or operators investigate and identify potentially contaminated areas of their facility and develop a schedule to remediate contamination associated with spills or releases of hazardous waste or hazardous waste constituents. Human health, safety, and the environment are protected through the identification and cleanup of contaminated areas. The above requirements for SHWCCAFs provide equivalent protections through waste containment safe-guards, emergency and spill response requirements, mandates for removal and mitigation of all wastes stored at the SHWCCAF, and Phase I assessment and corrective action requirements for the area defined by the operational boundary of the SHWCCAF.

Section 25150.6(b). Before DTSC gives notice of a proposal to adopt a regulation

exempting a hazardous waste activity from one or more of the requirements of this chapter pursuant to subdivision (a), and before DTSC adopts the regulation, DTSC shall evaluate the hazardous waste management activity and prepare, as required by paragraph (1) of the subdivision (a), an analysis that addresses all of the following aspects of the activity, to the extent that the requirement or requirements from which the activity will be exempted can affect these aspects of the activity:

DTSC Evaluation: This document provides the required evaluation and analysis. Applicable discussions follow after the text of each of the statutory subdivisions quoted below.

(1) The types of hazardous waste streams and the estimated amounts of hazardous waste that are managed as part of the activity and the hazards to human health or safety or to the environment posed by reasonably foreseeable mismanagement of those hazardous wastes and their hazardous constituents. The estimate of the amounts of hazardous waste that are managed as part of the activity shall be based upon information reasonable available to DTSC.

DTSC Evaluation: The specific waste streams, hazards of mismanagement, and estimated amounts of hazardous waste are discussed below.

Waste Streams and Hazards Associated with Mismanagement of the Wastes

The specific types of hazardous waste generated at a K - 12 school will vary according to the size and curriculum of school. However, the types of waste generated by the routine operation and maintenance of K - 12 schools is very similar to the types and amounts of wastes collected at household hazardous waste collection facilities that accept CESQG wastes currently authorized under PBR. Typical wastes generated by the routine operation and maintenance of K - 12 schools include:

A. Electronic equipment (i.e., computer monitors, etc.), batteries, and duplicating fluids from school daily operation and administration.

Computer monitors, televisions, some camcorders, and other electronic devices contain cathode ray tubes (CRTs) which convert an electronic signal into a visual image. A typical CRT contains between two and five pounds of lead, which is a toxic substance. Lead is a neurotoxin and reproductive toxin, which even at low levels can be permanently harmful to children. Decomposition of improperly disposed or managed CRTs can release lead into soil and water where it then can impact children and adults.

Batteries typically found at schools may include: rechargeable alkaline batteries; alkaline-manganese and zinc-carbon containing mercury batteries; button cell mercuric-oxide batteries; non-rechargeable alkaline-zinc batteries; non-rechargeable lithium ion batteries; silver cells; carbon-zinc cells; and other rechargeable and non-rechargeable batteries. Most batteries contain relatively small amounts of acidic or alkaline materials and solid or dissolved metals. While the contents can be very corrosive and toxic, they are individually packaged in very small to small packages, which are designed and manufactured to contain their contents during shipment, sales, and use. The major hazards posed by batteries come from the rupture of large amounts of batteries. Rupture of the batteries from mechanical breakage or decomposition can expose persons or environmental receptors to corrosive electrolytes and toxic metals. However, rupture of significant amounts of batteries would take place only if they were accumulated for a very long time (and/or in large numbers) and then crushed or ground.

Duplicating fluids are usually solvent based and typically are hazardous due to toxicity and ignitability. Some duplicating fluids contain denatured ethyl alcohol, methyl alcohol, or acetone and can be fatal or cause blindness if swallowed. The major hazards associated with mismanagement of waste duplicating fluids include oral, dermal, or vapor exposure from spills or releases, and fires due to ignition of the fluid or vapors.

B. Chemical and biological hazardous wastes from chemistry and science labs.

Acids, bases, and other chemical wastes may be generated from school science labs. These chemicals can be hazardous due to toxicity (e.g., barium, arsenic, or lead compounds); corrosivity [e.g., hydrochloric or nitric acids, and ammonium hydroxide (base)]; ignitability (e.g., acetone, methanol); or reactivity (e.g. magnesium or calcium carbide). [It should be noted that while some very hazardous reactive and explosive wastes can be generated in school science laboratories, reactive and explosive wastes are not authorized for management at a SHWCCAF according to the proposed regulations. These wastes should be managed and removed by specially trained personnel, such as emergency response teams, when discovered in science labs.] Spills or releases of these wastes can result in fires, chemical burns to humans, short and long term damage due to inhalation of gases or fumes, and environmental contamination.

In addition to chemical wastes, biological wastes such as animal specimens preserved in formaldehyde may be generated in science labs. Formaldehyde is a suspected human carcinogen but its toxicity is primarily related to formaldehyde fumes and vapors. Inhalation of vapors may result in irritation of

the eyes, nose, and throat and frequently results in upper respiratory tract irritation. Hazards associated with the mismanagement of wastes preserved in formaldehyde include exposure to vapors, fumes, or liquids from spills or releases of the waste.

C. Used oil, antifreeze, solvents, and auto batteries from auto repair shops and classrooms or compressors.

Used oil typically is considered hazardous due to toxicity from metals or organic contaminants mixed into the oil. The main hazard associated with mismanagement of used oil is soil or water contamination from spills, releases, or illegal disposal of the used oil to the ground or stormwater/sewer drains. Even small amounts of used oil discharged to water can render the water unfit for human consumption.

Auto batteries, also known as lead-acid batteries, are batteries with a capacity of six volts or more that are comprised of both lead and sulfuric acid. Hazards associated with mismanagement of waste batteries (especially cracked or damaged batteries) include chemical burns to persons and environmental damage from releases of battery acid, ingestion of lead dust, and environmental contamination from lead mobilized by battery acid or otherwise leached from decomposition of the battery.

Antifreeze is primarily composed of ethylene glycol, which is toxic to both humans and animals. With respect to human toxicity, ethylene glycol has been shown to be lethal in doses as small as 100 milliliters. Even smaller doses are known to be lethal to cats and dogs. The main hazard associated with mismanagement of antifreeze is the potential for human and animal exposure due to spills or releases. Children and pets are often attracted to the sweet smell and color of the antifreeze. This is a significant concern because the smaller body weights of children and pets means ingestion of even small amounts of undiluted antifreeze could be lethal or severely damage internal organs.

Industrial solvents, such as methylene chloride, trichloroethylene, and trichloroethane, are commonly used to clean and degrease parts in auto repair shops. Waste solvents are usually considered hazardous due to toxicity (including carcinogenicity) and ignitability. Hazards associated with mismanagement of solvents include fires or exposure due to spills or releases of solvents or vapors generated by the solvents.

D. PCB-containing light ballasts, asbestos-containing wastes, and lead-based paint wastes from school facility repairs and construction.

PCB-containing light ballasts are a concern due to their PCB content. PCBs (or polychlorinated biphenyls) are persistent and bioaccumulative toxic and carcinogenic substances. Hazards associated with mismanagement of PCB-containing lighting ballasts are human exposure to liquid PCBs or PCB vapors released or drained from light ballasts, and environmental contamination from PCB released to air, water, or soil. Fires involving PCB-containing light ballasts may also occur and cause PCBs to be released into the environment as vapors or particles.

Asbestos-containing wastes may include floor tiles, building insulation, or patching and spackling compounds. Asbestos-containing wastes are a concern because exposure to asbestos fibers and dust may cause lung cancer and mesothelioma, a rare cancer of the lining of the chest and abdomen. The main hazards associated with mismanagement of asbestos-containing wastes come from inhalation of fibers and dusts released from damaged, exposed, or decomposing asbestos-containing materials.

Lead-based paint chips and debris are usually considered hazardous due to their lead content. As noted above, lead is toxic and exposure to even low levels of lead can result in lead-poisoning in children in particular. Hazards associated with mismanagement of lead-based paints chips and debris include oral, dermal, and inhalation ingestion hazards to children from paint chips and dust, as well as environmental contamination resulting from releases of lead to soil or water from decomposition of paint chips, dust, or debris.

E. Pesticides, cleaning products, and latex or oil-based paint wastes from school maintenance and housekeeping or janitorial functions.

Pesticides may be used at schools as aerosols, liquids, or in pellet form to control various types of pests and insects. In general pesticides are toxic to humans, but the specific impacts to humans, plants, or animals will depend on the type of pesticide and amount of exposure received. The main hazards of mismanagement pesticide wastes include oral, dermal, or inhalation exposures from spills or releases of pesticides. Children are particularly susceptible to exposure from pesticides in soil and standing water because of children spend more time playing outdoors than adults.

Cleaning products, such as glass and floor cleaners or wax stripping products, may contain toxic, corrosive, or ignitable constituents (including ammonia, solvents, or isopropyl alcohol) which would make them hazardous. Hazards associated with mismanagement of cleaning product wastes include human exposure from spills or releases, fires, or environmental contamination from

constituents found in the wastes.

Latex (water-based) paints and oil-based (or solvent-based) paints may be considered toxic due to chemical ingredients or additives such as lead (used for durability), mercury (used as a fungicide), or cadmium and chromium (used as pigments). In addition, oil or solvent-based paints may also be flammable or ignitable, and may contain volatile organic compounds (VOCs). Hazards associated with mismanagement of the wastes include human exposure to toxic constituents (such as through ingestion of liquid paint or dried paint chips) and VOCs, fires (due to ignitability of solvent components), and release of toxic constituents (such as lead and mercury) into the environment from spills or decomposition of paint.

Estimated Volumes of Waste Managed under Exempted Activities

The volumes of hazardous waste to be managed under the exemptions for transportation to the SHWCCAF without a manifest or registered transporter range from a minimum of 5 gallons or 50 pounds of waste to a maximum of 135 gallons or 1,100 pounds of waste per shipment.

The maximum volume of waste to be managed at the SHWCCAF under the Phase I exemption is 1,080 gallons or 8,800 pounds of hazardous waste at any one time.

(2) The complexity of the activity, and the amount and complexity of operator training, equipment installation and maintenance, and monitoring that are required to ensure that the activity is conducted in a manner that safely and effectively manages the particular hazardous waste stream.

DTSC Evaluation: The complexity and amount of operator training required to transport of the school hazardous wastes safely without a manifest or registered transporter is not significantly greater than what is required for safe transport of non-hazardous waste. The complexity and training required for the actual driving activity will be the same under all conditions. The waste restrictions, packaging, and hazardous waste handling and emergency response training requirements included in the final regulations further ensure that the wastes are transported safely.

Since the exemption from the Phase I requirement only involves the designation of the area to be considered for the Phase I assessment, there is no change in the complexity or amount of training from the existing requirements.

(3) The chemical or physical hazards that are associated with the activity and the degree to which those hazards are similar to, or differ from, the chemical or physical hazards that are associated with the production processes that are carried out in the facilities that produce the hazardous waste that is managed as part of the activity.

DTSC Evaluation: The chemical or physical hazards associated with transportation of K - 12 school hazardous wastes to a SHWCCAF are actually much less than the hazards associated with generation of the waste at the schools. During transport the wastes are shipped in closed containers so that exposure to or releases of the waste are not possible, whereas exposure or release of the wastes during generation may be possible because the waste has not yet been packaged and may be open to the environment.

Most schools manage their hazardous wastes onsite, as hazardous waste generators, in storage areas on campus (often the janitor's closet), or in the science lab or other classrooms in close proximity to students. Under generator requirements the wastes may be stored onsite for 90, 180, or 270 days, depending on the amount of waste generated each month. The wastes are often stored without adequate security provisions by persons lacking chemical or hazardous waste safety training. Access to the wastes may be uncontrolled, with wastes stored in fume hoods or open cabinets. Even where waste is sequestered from students, access to the waste may be simply a matter of breaking a lock and entering a storage cabinet or room. In addition to the potential harm to students from exposure to the hazardous wastes themselves, the harmful impacts from events such as fire or vandalism are often greatly increased if hazardous wastes stored onsite are involved.

In contrast, transportation to and accumulation of K - 12 school hazardous waste at a SHWCCAF would allow schools to remove wastes stored onsite and provide an incentive for more timely shipment of wastes once generated. This would reduce both the volume of hazardous wastes stored onsite and the length of time stored, thereby reducing the potential for student exposure to the wastes. In addition, the SHWCCAF operating requirements provide for increased security and environmental protections over what may be available at individual schools.

(4) The types of accidents that might reasonably be foreseen to occur during the management of particular types of hazardous waste streams as part of the activity, the likely consequences of those accidents, and the actual reasonably available accident history associated with the activity.

DTSC Evaluation: Motor vehicle accidents are the main types of accidents that might occur during transportation of hazardous wastes from the contributing

schools to the SHWCCAF. In general, the consequences of motor vehicle accidents can range from minor accidents where vehicles are only dented ("fender-benders") to major accidents involving loss of life, fire, and potential environmental damage from releases of gasoline, antifreeze, plastics and metals from the vehicles themselves. In accidents where hazardous wastes are involved, releases of hazardous waste could expand the consequences of the accident to include human exposure to toxic fumes (generated from fires or gaseous vapors) or direct exposure to spilled wastes, and environmental contamination from the hazardous wastes (in addition to the potential releases of gasoline or antifreeze from the vehicles themselves). In extreme cases, accidents involving releases of hazardous wastes may require evacuation of the area and/or special cleanup operations to remove toxic materials or wastes.

Since the proposed transportation activity has not been previously authorized, accident histories specific to the activity are not available. However, because the volumes of hazardous waste being transported are relatively small, the accident probabilities and consequences from transport of hazardous wastes from contributing schools to the SHWCCAF without a hazardous waste manifest or registered transporter would likely be similar to those associated with motor vehicle accidents in general.

In contrast, transport of hazardous wastes under existing transportation requirements would likely mean less frequent but significantly larger shipments of hazardous waste. Because of the cost and added steps required to ship wastes using a manifest and registered transporter, schools will continue to store wastes onsite as long as possible in order to accumulate sufficient waste to make transport more economical. Consequently, the potential for student exposure to hazardous wastes stored onsite is not lessened. Larger hazardous waste shipments may also increase the risks or consequences associated with hazardous waste transport due to the potential for exposure to larger volumes of waste in the event of an accident. In addition, registered hazardous waste transporters often use very large vehicles to pick up hazardous wastes from a variety of sources. In these cases, transportation risks may be increased because large volumes of hazardous wastes are being transported to the school (as part of the transporter's existing load) as well as from the school.

(5) The types of locations at which the activity may be carried out, an estimate of the number of these locations, and the types of hazards that may be posed by proximity to the land uses described in subdivision (b) of Section 25232. The estimate of the number of locations at which the activity may be carried out shall be based upon information reasonably available to DTSC.

DTSC Evaluation:

The actual number of schools districts who will elect to operate a SHWCCAF under the final regulations is not known at this time. There are approximately 1,045 public school districts and several hundred private school districts currently operating in California, and the number of schools per district ranges from one school to a maximum of 699 schools. School districts will likely elect to operate a SHWCCAF only if the number of schools and the volumes of waste generated are sufficient to warrant operation of a SHWCCAF. Operation of a SHWCCAF may be most appealing to the large or medium size urban school districts (those with more than 20 schools in close proximity) because of the economies of scale provided by offsite storage and transport to an authorized disposal facility from the SHWCCAF. However, the hazard reduction benefits to students and school staff gained by the timely removal of hazardous wastes from schools and storage at a SHWCCAF may be sufficient for school districts of any size to elect to operate a SHWCCAF.

The land uses described in HSC section 25232(b) are residences, hospitals for humans, schools for persons under 21, day care centers, and non-industrial permanent human habitations. Transportation of no more than 135 gallons or 1,100 pounds of hazardous wastes from contributing schools to the SHWCCAF will occur on roads and highways and may occur in proximity to any or all of the land uses listed above. K - 12 schools shipping the hazardous wastes are considered schools for persons under 21 and they usually are located in or near residential areas that may also include hospitals, day care centers, or other human habitations. As discussed above, since the number of school districts who will elect to operate a SHWCCAF is not known, the number of locations that may be impacted by the transportation of wastes from schools to a SHWCCAF is unknown. The main hazards posed by transportation of the schools hazardous waste in proximity to the above land uses are impacts related to motor vehicle accidents where hazardous waste or hazardous waste constituents are released due to fire or spills.

FINDINGS:

Section 25150.6(c): DTSC shall not give notice proposing the adoption of, and DTSC may not adopt, a regulation pursuant to subdivision (a) unless if first demonstrates, using the information developed in the analysis prepared pursuant to subdivision (b), that one of the following is valid:

(1) The requirement from which the activity is exempted is not significant or important in either of the following:

(A) Preventing or mitigating potential hazards to human health or safety or to the environment posed by the activity.

> **DTSC Evaluation:** The above finding is not applicable to the exemptions for transport without a hazardous waste manifest and registered transporter, and SHWCCAF Phase I scope limitation provided in the final regulations.

(B) Ensuring that the activity is conducted in compliance with other applicable requirements of this chapter and the regulations adopted pursuant to this chapter.

> **DTSC Evaluation:** The above finding is not applicable to the exemptions for transport without a hazardous waste manifest and registered transporter, and SHWCCAF Phase I scope limitation provided in the final regulations.

(2) A requirement is imposed and enforced by another public agency that provides protection of human health and safety and the environment that is as effective as, and equivalent to, the protection provided by the requirement, or requirements, from which the activity is being exempted.

> **DTSC Evaluation:** The above finding is not applicable to the exemptions for transport without a hazardous waste manifest and registered transporter, and SHWCCAF Phase I scope limitation provided in the final regulations.

(3) Conditions or limitations imposed on the exemption will provide protection of human health and safety and the environment equivalent to the requirement, or requirements, from which the activity is exempted.

> **DTSC Evaluation:** The above finding is applicable to the exemption allowing transportation of hazardous wastes from K - 12 schools to the SHWCCAF without a manifest or registered transporter. Application of both general conditions and conditions specific to the exempted activities provides protection of human health and safety, and the environment that is equivalent or superior to the protection provided by current requirements. Brief summaries of the rationales for adopting the exemptions to existing law found in the final SHWCCAF regulations are provided below:
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> **A. Rationale for the Exemption from the Manifest Requirement:**
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> The main purpose of the hazardous waste manifest is to provide “cradle to grave” tracking of hazardous wastes from the point of generation to final disposition (disposal or recycling). However, DTSC has determined that the costs associated with the use of manifests serve as a disincentive for schools to

provide proper management and timely removal of hazardous waste from schoolyard locations, where the potential for student exposure to the wastes is greatest. In addition to the manifest fees applied per manifest, use of a manifest requires that the waste be shipped using a registered transporter, further increasing costs and decreasing the incentive for proper management of the wastes. To provide an incentive for proper management and transport of the wastes without the added cost of a manifest, the final regulations allow waste shipments of no more than 135 gallons or 1,100 pounds to be shipped using a shipping paper only in vehicles owned or operated by the schools or school district, and only by trained personnel. These conditions provide for human health, safety, and environmental protections and waste tracking provisions equivalent to those of the hazardous waste manifest requirement.

B. Rationale for the Exemption from the Registered Hazardous Waste Transporter Requirement:

With some exceptions, State law requires the use of a registered hazardous waste transporter to transport hazardous waste. The major benefit of hazardous waste transporter registration is a slightly higher level of liability insurance since the training and equipment required to obtain a hazardous materials endorsement on a drivers license are equivalent to those of the hazardous waste transporter registration program. DTSC has determined that the hazardous waste transporter requirement adds sufficient extra expense to the transportation of eligible K - 12 schools hazardous waste to the SHWCCAF to provide a disincentive for proper management and timely removal of hazardous waste from schoolyard locations, where the potential for student exposure to the wastes is greatest. The final regulations not only provide an incentive for timely removal of hazardous wastes from schools by not requiring use of a registered transported, but also establish vehicle use, personnel training, and liability assessment requirements that are equally protective of human health, safety, and the environment as the registered transporter requirement.

(4) Conditions or limitations imposed on the exemption accomplish the same regulatory purpose as the requirement, or requirements, from which the activity is being exempted but at less cost or greater administrative convenience and without increasing potential risks to human health or safety or to the environment.

DTSC Evaluation: The above finding is applicable to the exemption limiting the scope of the Phase I environmental assessment requirement to only the operational area of the SHWCCAF. Application of both general conditions and conditions specific to the exempted activity provides equivalent protection of human health and safety, and the environment but at less cost or greater

administrative convenience. The following is a summary of the rationale.

A. Rationale For Exemption From The Manifest Requirement.

Given the conditions and waste management restrictions found in the final regulations for transportation of school wastes to the SHWCCAF, there is little significant or direct environmental protection provided by application of the existing hazardous waste manifest requirement. The added costs and inconvenience of using a manifest would provide a disincentive for proper management and timely removal of hazardous wastes from K - 12 schools. DTSC has determined that the benefits to children from timely removal of hazardous wastes are sufficient to allow transport without use of a hazardous waste manifest under the conditions specified in the final regulations.

B. Rationale For Exemption From The Registered Hazardous Waste Transporter Requirement.

Given the conditions and waste management restrictions found in the final regulations for transportation of school wastes to the SHWCCAF, there is little significant or direct environmental protection provided by application of the existing hazardous waste registered transporter requirement. The added costs and inconvenience of using a registered transporter would provide a disincentive for proper management and timely removal of hazardous wastes from K - 12 schools. DTSC has determined that the benefits to children from timely removal of hazardous wastes are sufficient to allow transport without use of a registered transporter under the conditions specified in the final regulations.

C. Rationale for the Exemption from the Phase I Environmental Assessment Scope:

DTSC has determined that limiting the scope of the Phase I environmental assessment at SHWCCAF is appropriate for the following two main reasons:

First, the K - 12 schools wastes and risks associated with management of those wastes are similar to household hazardous and CESQG wastes managed at PHHWCFs authorized under PBR. Existing Phase I requirements for PHHWCFs limit the scope of the Phase I to the operational boundaries of the PHHWCF. Since the wastes and risks associated with the management of those wastes at a SHWCCAF are similar to those managed at a PHHWCF, DTSC has determined that limitation of the scope of the Phase I is also appropriate for SHWCCAFs.

Second, SHWCCAFs must be located on non-schoolyard property, in direct

control of the school district, that is consistent with local land uses. For most school districts the location best fitting this requirement will be the district's corporation yard or other industrial property. Since the SHWCCAF will only cover a portion of the corporation yard, extension of the Phase I environmental assessment to the entire corporation yard serves as a strong disincentive for the school district to operate a SHWCCAF. Given the conditions imposed on operation of a SHWCCAF under the final regulations, DTSC has determined that the physical benefits to children from timely removal of hazardous wastes are sufficiently greater than the administrative benefits of a full site Phase I. Therefore, DTSC is allowing limitation of the scope of Phase I at the SHWCCAF to the operational boundaries of the SHWCCAF only.

NECESSITY REQUIREMENT:

Section 25150.6(d). A regulation adopted pursuant to this section shall not be deemed to meet the standard of necessity, pursuant to Section 11349.1 of the Government Code, unless DTSC has complied with subdivisions (b) and (c).

DTSC Evaluation: As indicated above, this document represents compliance with Health and Safety Code Sections 25150.6(b) and (c).

COMPLIANCE WITH FEDERAL ACT:

Section 25150.6(e). DTSC shall not exempt a hazardous waste management activity from a requirement of this chapter or the regulations adopted by DTSC if the requirement is also a requirement for that activity under the federal act.

DTSC Evaluation: The final regulations apply to only those hazardous wastes that are either non-RCRA, or are RCRA hazardous wastes whose transportation to and management at the SHWCCAF is exempt from, or is not otherwise regulated pursuant to, the federal act. Therefore, DTSC may exempt the transportation and Phase I activities from existing California hazardous waste requirements because the requirements for the activities are not requirements of the federal act.

SUNSET OF AUTHORITY:

Section 25150.6(f). The authority of DTSC to adopt regulations pursuant to this section shall remain in effect only until January 1, 2002, unless a later enacted statute, which is enacted before January 1, 2002, deletes or extends that date. This subdivision does not invalidate any regulation adopted pursuant to this section prior to the expiration of DTSC's authority.

DTSC Evaluation: These regulations are being adopted prior to January 1, 2002; therefore, the authority to adopt these regulations pursuant to Health and Safety Code section 25150.6 is valid and effective.

CONCLUSION: Based on the above analysis, DTSC concludes that the final regulations meet the criteria of Health and Safety Code Section 25150.6 for variance from existing statutory requirements and will provide protection of human health, safety, and the environment.

Appendix.

HEALTH AND SAFETY CODE
SECTION 25150.6

25150.6. (a) Except as provided in subdivision (e), the department, by regulation, may exempt a hazardous waste management activity from one or more of the requirements of this chapter, if the department does all of the following:

(1) Prepares an analysis of the hazardous waste management activity to which the exemption will apply pursuant to subdivision (b). The department shall first prepare the analysis as a preliminary analysis and make it available to the public at the same time that the department gives notice, pursuant to Section 11346.4 of the Government Code, that it proposes to adopt a regulation exempting the hazardous waste management activity from one or more of the requirements of this chapter. The department shall include, in the notice, a reference that the department has prepared a preliminary analysis and a statement concerning where a copy of the preliminary analysis can be obtained. The information in the preliminary analysis shall be updated and the department shall make the analysis available to the public as a final analysis not less than ten working days prior to the date that the regulation is adopted.

(2) Demonstrates that one of the conclusions required by subdivision (c) is valid.

(3) Imposes, as may be necessary, conditions and limitations on the exemption that ensure that the exempted activity will not pose a significant potential hazard to human health or safety or to the environment.

(b) Before the department gives notice of a proposal to adopt a regulation exempting a hazardous waste activity from one or more of the requirements of this chapter pursuant to subdivision (a), and before the department adopts the regulation, the department shall evaluate the hazardous waste management activity and prepare, as required by paragraph (1) of subdivision (a), an analysis that addresses all of the following aspects of the activity, to the extent that the requirement or requirements from which the activity will be exempted can affect these aspects of the activity:

(1) The types of hazardous waste streams and the estimated amounts of hazardous waste that are managed as part of the activity and the hazards to human health or safety or to the environment posed by

reasonably foreseeable mismanagement of those hazardous wastes and their hazardous constituents. The estimate of the amounts of hazardous waste that are managed as part of the activity shall be based upon information reasonably available to the department.

(2) The complexity of the activity, and the amount and complexity of operator training, equipment installation and maintenance, and monitoring that are required to ensure that the activity is conducted in a manner that safely and effectively manages the particular hazardous waste stream.

(3) The chemical or physical hazards that are associated with the activity and the degree to which those hazards are similar to, or differ from, the chemical or physical hazards that are associated with the production processes that are carried out in the facilities that produce the hazardous waste that is managed as part of the activity.

(4) The types of accidents that might reasonably be foreseen to occur during the management of particular types of hazardous waste streams as part of the activity, the likely consequences of those accidents, and the actual reasonably available accident history associated with the activity.

(5) The types of locations at which the activity may be carried out, an estimate of the number of these locations, and the types of hazards that may be posed by proximity to the land uses described in subdivision (b) of Section 25232. The estimate of the number of locations at which the activity may be carried out shall be based upon information reasonably available to the department.

(c) The department shall not give notice proposing the adoption of, and the department may not adopt, a regulation pursuant to subdivision (a) unless it first demonstrates, using the information developed in the analysis prepared pursuant to subdivision (b), that one of the following is valid:

(1) The requirement from which the activity is exempted is not significant or important in either of the following:

(A) Preventing or mitigating potential hazards to human health or safety or to the environment posed by the activity.

(B) Ensuring that the activity is conducted in compliance with other applicable requirements of this chapter and the regulations adopted pursuant to this chapter.

(2) A requirement is imposed and enforced by another public agency that provides protection of human health and safety and the environment that is as effective as, and equivalent to, the protection provided by the requirement, or requirements, from which

the activity is being exempted.

(3) Conditions or limitations imposed on the exemption will provide protection of human health and safety and the environment equivalent to the requirement, or requirements, from which the activity is exempted.

(4) Conditions or limitations imposed on the exemption accomplish the same regulatory purpose as the requirement, or requirements, from which the activity is being exempted but at less cost or greater administrative convenience and without increasing potential risks to human health or safety or to the environment.

(d) A regulation adopted pursuant to this section shall not be deemed to meet the standard of necessity, pursuant to Section 11349.1 of the Government Code, unless the department has complied with subdivisions (b) and (c).

(e) The department shall not exempt a hazardous waste management activity from a requirement of this chapter or the regulations adopted by the department if the requirement is also a requirement for that activity under the federal act.

(f) The authority of the department to adopt regulations pursuant to this section shall remain in effect only until January 1, 2002, unless a later enacted statute, which is enacted before January 1, 2002, deletes or extends that date. This subdivision does not invalidate any regulation adopted pursuant to this section prior to the expiration of the department's authority.